

Alan Wu

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SKILLS

Languages

Golang, Java, JavaScript, PHP, Python, Ruby

Frameworks

Django, NodeJS, ReactJS, Ruby on Rails

DataStores

Elasticsearch, MongoDB, MySQL, Redis

Cloud & DevOps

AWS, Docker, GCP, Jenkins, Kubernetes

WORK EXPERIENCE

Software Engineering Intern

Shopify

09/2019 – 12/2019

Ottawa, ON

- ▣ Built tooling to manage Kubernetes on Google Cloud with over 60 clusters and 500 services in Golang and Ruby on Rails
- ▣ Developed monitoring system on SQL database replication lag and defined SLO to ensure high service availability across clusters and regions
- ▣ Improved fault tolerance of networking by reducing DNS resolution time by 90% during upstream failure to handle 180k requests per second
- ▣ Built multithreaded Kubernetes controllers with caching to concurrently manage custom datastore resources such as MySQL and Redis

Full Stack Developer Intern

BlackBerry

01/2019 – 05/2019

Waterloo, ON

- ▣ Built Rails microservices and consoles to provide cloud computing, monitoring, cost management, and DevOps services
- ▣ Practiced test-driven development to unit test APIs with Rspec and Capybara, achieving a 95% Jenkins CI builds success rate
- ▣ Visualized over 20 data centers' utilization and performance metrics through Elasticsearch to reduce cost and avoid VM over-provisioning
- ▣ Trained and integrated an AI chat-bot with Rails APIs to streamline CI/CD pipeline and facilitate Agile development cycle

PROJECTS

Rideshare App

AWS, Docker, Kubernetes, MongoDB, NodeJS, ReactJS

06/2018 – 10/2018

- ▣ Developed a ReactJS ridesharing app that matches student drivers to passengers based on their shared destinations
- ▣ Built microservice architecture for ETL pipeline and real-time search with Elasticsearch and persistent MongoDB deployed on AWS EBS
- ▣ Created serverless NodeJS API to manage user authentication with AWS Lambda and API Gateway to decrease latency and save compute cost

CI/CD Chatbot

Azure, Gitlab, Jenkins, JIRA, MySQL, Redis, Ruby on Rails

03/2019 – 05/2019

- ▣ Built an intelligent assistant to streamline Agile development and optimize the CI/CD pipeline by centralizing scattered resources
- ▣ Trained and integrated a natural language processing model with Microsoft Azure ML services to accurately extract entities and intents
- ▣ The chatbot utilized Rails APIs from Gitlab, JIRA, and Jenkins; also used Redis to ensure a fast response by hot caching user requests

ACHIEVEMENTS

Google Cloud X Hopper Hackathon, 1st Place

- ▣ Built serverless API to recommend vaccines based on traveler's destination

Shopify Cyber Security CTF, 2nd Place

- ▣ Reverse engineer, decrypt, and script web apps and networks

UWaterloo Engineering 2018 Co-op Student of the Year Award

- ▣ Nominated for exceptional contributions to work term employer

Microsoft Product Management Case Comp, Top 3

- ▣ Designed dual-mode functionality to increase Surface's marketshare

EDUCATION

Management Engineering, 3A

University of Waterloo

09/2017 – 05/2022

- ▣ Cumulative GPA of 3.70